

### **III. REMARKS**

Claims 1, 4, 10, 12-14 and 32-33 are pending in this application. By this Amendment, claim 12 has been amended and claims 3, 5-9, 11, 15-31 have been canceled. Applicants do not acquiesce in the correctness of the rejections and reserve the right to present specific arguments regarding any rejected claims not specifically addressed. Furthermore, Applicants reserve the right to pursue the full scope of the subject matter of the original claims in a subsequent patent application that claims priority to the instant application. Reconsideration in view of the following remarks is respectfully requested.

In the Office Action, claims 32-33 are rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. Specifically, the Office states that “it appears that the limitations of ‘means for storing a result of the testing...’ as recited in claim 32 has no support in the original specification.” Office Action at p. 2. This explicit “storage” language in the claims was added solely because the Office insisted that the claims were not directed to statutory subject matter because they allegedly did not have “tangible results.” Applicants disagreed, and continue to disagree, with the Office’s assertion, but included the “storage” language to comply with the Office’s ever-changing concept of what superfluous magic words must be present in a claim to be considered statutory subject matter. Even without this language, the claimed invention has a clear tangible result and is directed to statutory subject matter. The claimed invention is directed to a method for testing integrated circuits. As with any invention relating to computers, a storage step is inherent. In this case, a circuit is tested, and the result of that testing is stored in the control unit so that it can then be analyzed. One of ordinary skill in the art would certainly understand this from reading the

claims, and Applicants do not need to spell out how a computer works in the specification. Furthermore, Applicants submit that this storage capacity of the control unit is disclosed in the specification, specifically at paragraph [0020] “the determining step according to the methods may include comparing outputs of the circuit to expected results for a defect-free circuit, which may be stored in control unit 40.” Accordingly, the “means for storing a result of the testing” as included in claim 32 is not “new matter” as asserted by the Office. Instead, as one of ordinary skill in the art would understand, it is one of the inherent functions of the control unit (i.e. computer) in the disclosure. As such, there is no new matter, and Applicants request that this rejection be withdrawn.

In the Office Action, the drawings are also objected to for allegedly failing to show the “means for storing a result of the testing in a control unit.” Again, as discussed above, this storage means is an inherent function of the control unit of the disclosure. Illustrating the storage capacity of a control unit in a drawing is not only impractical, but unnecessary as one of ordinary skill in the art would certainly understand that a capacity to store is inherent in how a control unit or computer works. As such, the drawings are proper and Applicants request that this rejection be withdrawn.

In the Office Action, claims 1, 4, 10, 12-14 and 32-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Again, Applicants disagree with the Office. The standard for whether a claim meets the requirements of 35 U.S.C. 112, second paragraph is “whether the claim is definite - i.e., whether the scope of the claim is clear to a hypothetical person possessing the ordinary level of skill in the pertinent art.” MPEP

§2171. Here, the claimed invention is a method for testing circuits. The claims are written succinctly and clearly, and anyone reading the claims, especially one of ordinary skill in the art, would have no trouble understanding them.

In contrast to a proper rejection under 35 U.S.C. 112, second paragraph, directed to an indefinite claim term, the Office's rejection here consists of broad requests for clarification on how the invention generally works. These requests for clarification are apparent attempts to require the Applicants to re-explain the entire concept of the invention, which is already laid out in detail in the specification. This requirement is improper, as it is not the Applicants' burden to rewrite the specification in an Office Action Response for the Office.

For example, the Office states that it is unclear how an integrated circuit is tested in order to obtain a testing result. This statement goes to the very heart of Applicants' invention. The invention is a method for testing a circuit, and asking the Applicants to explain how the circuit is tested is tantamount to a request for the Applicants to re-explain everything that is already set forth in the specification. In fact, the specification clearly and succinctly explains all the so-called "unclear" aspects of the claims that the Office notes in the Office Action. One of ordinary skill in the art would read the claims, and the specification, and would have no trouble understanding this method of testing. Responding to the Office's specific requests for clarification, Applicants state as follows:

Office's Statement: "In claim 1, it is unclear how an integrated circuit is tested in order to obtain a testing result."

Applicants' Response: As discussed above, responding to this request would require Applicants to reiterate almost the entire disclosure in the specification. As the specification

discloses, “[t]he testing may include voltage-based testing, static leakage current IDDQ testing, and stress testing.” Para. [0018]. These testing methods are described in more detail, including specific examples, in paragraphs [0025]-[0098].

Office’s Statement: “It is unclear how the P-well bias and the N-well bias are interrelated and associated with the test result and the defect.”

Applicants’ Response: As the specification discloses: “A modification of the well bias controls transistor V<sub>t</sub> during the testing.” Para. [0017]. The specification then goes on to explain that “the determining step according to the methods may include comparing outputs of the circuit to expected results for a defect-free circuit, which may be stored in control unit 40.” Para. [0020]. As the Abstract also states, modifying a well bias during testing improves the resolution of voltage-based and IDDQ testing. Also see paragraph [0025]: “The method of modifying the well bias during test. . . enhances the detectability and diagnosability of manufacturing defects.”

Office’s Statement: “It appears that the scope of the claim is incomplete since the step of independently modifying a P-well bias of an n-transistor (16) and an N-well bias (18) of a P-transistor (20) is not a testing step.”

Applicants’ Response: As discussed above, modifying the well biases during testing is part of the testing step. Modifying the well biases controls transistor V<sub>t</sub> during the testing. Para. [0017].

Office’s Statement: “In claim 10, it is unclear how the voltage based testing is interrelated and associated with the modifying step and determining step in claim 1.”

Applicants' Response: In claim 1, a testing step, modifying step and determining step are claimed. Claim 10 simply states that the testing step of claim 1 includes voltage-based testing, one of the types of testing that is disclosed in the specification.

Office's Statement: "In claim 12, it is unclear which part of the circuit in which the low VDD is applied to."

Applicants' Response: One of ordinary skill in the art would understand that VDD refers to power voltage and it is applied to the integrated circuit wherever appropriate. Applicants have amended claim 12 to further clarify this aspect of the invention.

Office's Statement: "In claim 32, it is unclear what "means for storing a result of the testing in a control unit" comprises of. Is it shown in the drawings?"

Applicants' Response: As discussed above, this storage means is an inherent function of the control unit of the disclosure. In this case, a circuit is tested, and the result of that testing is stored in the control unit so that it can then be analyzed. Applicants submit that this storage capacity of the control unit is disclosed in the specification, specifically at paragraph [0020] "the determining step according to the methods may include comparing outputs of the circuit to expected results for a defect-free circuit, which may be stored in control unit 40." Illustrating the storage capacity of a control unit in a drawing is not only impractical, but unnecessary as one of ordinary skill in the art would certainly understand that a capacity to store is inherent in how a control unit or computer works.

As such, Applicants submit that all claims particularly point out and distinctly claim the subject matter of Applicant's invention and request that the rejections under 35 U.S.C. 112, second paragraph, be withdrawn. If the Office believes there is specific language that should

appear in the claims to more particularly point out the claimed invention, Applicants would appreciate the Office's suggestion for such language.

Applicants also note that despite the Office's assertions that the claims are indefinite and do not particularly point out the claimed invention, the Office was able to perform a search for prior art. (Office Action at p.4). It is important to note that no relevant art was found to meet the limitations of claims 1, 4, 10, 12-14 and 32-33.

#### **IV. CONCLUSION**

In light of the above, Applicants respectfully submit that all claims are in condition for allowance. Should the Examiner require anything further to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the number listed below.

Respectfully submitted,

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Date: December 10, 2007

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